Ultrasound Imaging of Uterine Malformations

ESHRE-ESGE Classification: A Practical Overview

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Three-dimensional transvaginal ultrasound (3D-TVS) is a non-invasive method for the evaluation of uterine anatomy. By acquiring a 3D volume, the system can reconstruct and simultaneously display three intersecting planes, including the critical coronal plane. Due to its high diagnostic accuracy, 3D-TVS has been proposed as the new "gold standard" for detecting uterine cavity abnormalities, playing an important role in the workup of the infertile patient.

Using the most recent European Society of Human Reproduction and Embryology (ESHRE) and European Society for Gynecological Endoscopy (ESGE) classification system,* one can easily and efficiently classify congenital anomalies of the female genital tract, which is of considerable importance in supporting pre-surgical planning of congenital malformation treatment. Provided is a description, graphic, and corresponding ultrasound image for each of the six classes of uterine malformations.

Class U0: Any uterus having either a straight or curved interostial line but with an internal indentation at the fundal midline not exceeding 50% of the uterine wall thickness.

Class U1a or T-Shaped Uterus: Characterized by a narrow uterine cavity due to thickened lateral walls with a correlation 2/3 uterine corpus and 1/3 cervix.

Class U1b or Uterus Infantilis: Characterized by a narrow uterine cavity without lateral wall thickening and an inverse correlation of 1/3 uterine corpus and 2/3 cervix.


Class U1c or Others: Includes all minor deformities of the uterine cavity with an inner indentation at the fundal midline level of <50% of the uterine wall thickness.

Class U2a or Partial Septate Uterus: Characterized by the existence of a septum that partially divides the uterine cavity above the level of the internal cervical os.

Class U2b or Complete Septate Uterus: Characterized by the existence of a septum fully dividing the uterine cavity up to the level of the internal cervical os.
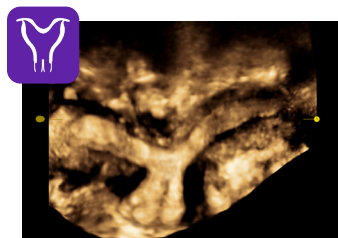
Class U3a or Partial Bicorporeal Uterus: Characterized by an external fundal indentation partially dividing the uterine corpus above the level of the cervix.

Class U3b or Complete Bicorporeal Uterus: Characterized by an external fundal indentation completely dividing the uterine corpus up to the level of the cervix.

Class U3c or Bicorporeal Septate Uterus: Characterized by the presence of an absorption defect in addition to the main fusion defect. The width of the midline fundal indentation exceeds the uterine wall thickness by 150%.

Class U4a or Hemi-Uterus with a Rudimentary (Functional) Cavity: Characterized by the presence of a communicating or non-communicating functional contralateral horn.

Class U4b or Hemi-Uterus Without a Rudimentary (Functional) Cavity: Characterized by the presence of a non-functional contralateral uterine horn or by aplasia of the contralateral part.

Scan QR code to watch a practical video demonstrating how 3D ultrasound helps in the diagnosis of uterine anomalies.